

US EPA ARCHIVE DOCUMENT

Shaughnessy No: 113201

Date Out of EAB: MAY 17 1985

To: Donald Stubbs  
Product Manager 41  
Registration Division (TS-767)

From: Samuel M. Creeger, Chief  
Environmental Chemistry Review Section 1  
Exposure Assessment Branch  
Hazard Evaluation Division TS-769c

**COPY**

Attached, please find the EAB review of:

Reg./File # : 85-WA-03

Chemical Name: Vinclozolin

Type Product : Fungicide

Product Name : RONILAN

Company Name : State of Washington

Purpose : Emergency exemption for use on caneberries in Washington

Action Code : 510

EAB #(s) : 5539

Date Received : 4/18/85

TAIS Code: 21

Date Completed: 5/17/85

Reviewing Time: 0.3 day

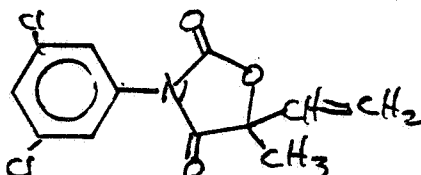
Deferrals to:

Ecological Effects Branch

Residue Chemistry Branch

Toxicology Branch

1. CHEMICAL:      Common Name- vinclozolin  
                          Chemical Name- 3-(3,5-dichlorophenyl)-5-ethenyl-methyl-2,4-oxazolidinedione  
                          Trade Name- Ronilan 50W  
                          Chemical Structure-



2. TEST MATERIAL: Not applicable. No new data were submitted.
3. STUDY/ACTION TYPE: Request by the Oregon Department of Agriculture for an Emergency Exemption (Section 18) to use vinclozolin to control Botrytis fruit rot fungus on caneberrries. The proposed exemption calls for an applicable rate of 0.5 to 1.0 lb ai/A per season (maximum of 13,500 lb ai) over 1500 acres. Supporting information is attached.
4. STUDY IDENTIFICATION: Not applicable. No new data were submitted.

5. REVIEWED BY:

Herbert L. Manning, Ph.D.  
 Microbiologist  
 EAB/HED

Signature: *Herbert L. Manning*  
 Date: 17 May 1985

6. APPROVED BY:

Samuel M. Creeger  
 Chief, Section 1  
 EAB/HED

Signature: *Sam M Creeger*  
 Date: MAY 17 1985

7. CONCLUSIONS:

The environmental fate data in our files supports the use of this fungicide on caneberrries.

8. RECOMMENDATIONS:

The data in EAB files supports the request for an Emergency Exemption (Section 18) to use vinclozolin on caneberries in Oregon.

9. BACKGROUND:

A. Introduction

See Section 3 of this review.

B. Directions for Use

See attached information.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES:

A. Study Identification

Not applicable. No new data were submitted.

11. COMPLETION OF ONE-LINER:

No data were submitted.

12. CONFIDENTIAL APPENDIX:

No CBI was submitted.



C. Alan Pettibor

Director

STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

4th General Administration Bldg. 4A-41 • Olympia Washington 98504 • (206) 753-5003

CERTIFIED

April 9, 1985

Donald Stubbs, Head  
Emergency Response Section  
Registration Division  
401 M Street Southwest  
Washington DC 20460

RE: Emergency use of vinclozolin (Ronilan) 3-(3, 5-dichlorophenyl)-5-ethenyl-methyl-2,4-oxazolidinedione on caneberries

Section 18 of Amended FIFRA provides the Administrator may, at his discretion, exempt any state or federal agency from provisions of FIFRA if he determines emergency conditions exist which require such exemptions.

Part 166, Chapter 1, Title 40, Rules and Regulations, provides criteria for emergency exemptions. We are applying for emergency use of Ronilan 50W to control Botrytis fruit rot on caneberries (including raspberries, blackberries, Youngberries, boysenberries and loganberries).

In previous years, identical emergency exemptions have been granted for this use in Washington, as well as several emergency exemptions for other raspberry problems. On April 8, 1985, a report summarizing the amount used and results in Washington for 1984 was submitted to you.

Information requested in 40 CFR 166.3(a) and by subsequent policies is as follows:

i. Botrytis cinerea Pers. ex. Fr. is the major causal organism of both pre-harvest and post-harvest fruit rots of caneberries. In addition to rotting fruit of the berry crop, B. cinerea attacks flowers (causing blossom blight) and canes. Infected canes are more sensitive to cold injury during the winter. B. cinerea produces spores on a wide range of living tissues, plant debris, and on soil, and as a result presents a constant threat of infection. Spores are disseminated by wind and splashing rain.

Post-harvest fruit rot (rot that develops on fruit after it is harvested) is of minimal concern to growers whose crop is processed. Control of rot after harvest is vitally important to

(4)

those shipping caneberries for sale on the fresh market. In 1981, 23% of the caneberries grown in Washington were sold fresh. Since that time, the amount has increased slightly.

2. The pest to be controlled is Botrytis fruit rot (Botrytis cinerea).

3. No cultivars contain useful levels of resistance. Registered fungicides include Benlate, captan, Botran and folpet. Botran and folpet are not commonly used, as they have a history of ineffectiveness. Recent research by several workers has shown an increasing problem of Benlate resistance in Botrytis in many crops. Work by H. S. Pipin of the Agriculture Canada Research Station in Vancouver, British Columbia, has documented local benomyl tolerance in Botrytis on strawberries and indicated a similar situation developing on raspberries. (Strawberries and raspberries are usually grown in close juxtaposition in western Washington). Captan has been used with limited success in years when climatic conditions were not favorable to disease development, but no fungicide has performed acceptably when cool, moist conditions persist during flowering and into harvest.

4. Ronilan 50W, EPA reg. no. 7969-53, manufactured by BASF Wyandotte Corporation.

5. (i) Dosage would be 1 to 2 lb. formulated product (0.5 to 1.0 lb. a.i.) per acre per application, with a maximum of 9 lb. a.i./acre per season. A maximum of 1500 acres would be treated, resulting in maximum possible usage of 13,500 lb. of active ingredient. Actual usage, of course, is anticipated to be considerably less, but depends on unpredictable early season weather.

(ii) All counties west of the crest of the Cascade Mountains.

(iii) Ground application only, using at least 100 gallons of spray suspension per acre.

(iv) Application should commence with a first application no later than 5% bloom. Repeat applications at 7-10 day intervals through harvest. First application should commence no later than May 1, and the season should extend through July 30. A seven (7) day preharvest interval is requested.

(v) Application by licensed commercial applicators or qualified growers.

6. Economic benefits and losses:

Most of the commercial caneberry production in Washington state is red raspberries, for which some economic data has been developed.

(5)

Whenever available, blackberry data has been included, although we estimate very little commercial blackberry acreage would be treated. Data past 1982 is unobtainable. The amount of other caneberries in Washington is probably negligible; however, those that do occur are very important to individual growers.

a. Production costs for caneberries are not available on a statewide basis. It has been estimated that a raspberry field must produce for a minimum of five years for a grower to recover establishment costs. The Washington Red Raspberry Commission has estimated their production costs for red raspberries at approximately \$0.66/lb.

b. Crop yields (over 13,000 tons of red raspberries were produced in Washington and Oregon 1980. This represented 80% of the total U.S. production).

<u>Year</u>	<u>Acreage Harvested</u>	<u>Yield/acre lbs.</u>	<u>Utilized Production/lbs.</u>
<b>Red Raspberries</b>			
1980	2,800	4,500	12,600,000
1981	2,800	4,750	13,300,000
1982	2,800	5,650	15,820,000
1983	2,600	5,540	14,404,000
1984	2,750	5,820	16,300,000

**Blackberries**

1980	200	3,500	840,000
1981	240	3,750	825,000
1982	200	3,750	750,000

c. Price received:

<u>Year</u>	<u>Cents/lb.</u>	<u>Value of Crop (\$)</u>
<b>Red raspberries</b>		
1980	37.3	4,700,000
1981	52.0	6,916,000
1982	67.9	10,745,300
1983	45.2	6,511,000
1984	47.5	7,742,500

**Blackberries**

1980	15.8	133,000
1981	22.5	185,600
1982	19.0	142,500

d. Estimation of the percent control of the pest with registered pesticides: On small acreage crops such as caneberries, this information is unavailable, particularly (as in the case of Botrytis) when a part of the crop loss is due to infection of the blossom, so that fruit never sets, and part is due to rotting of fruit already formed. In years when moist, cool weather continues through flowering, losses of 50% can occur. In 1977, 1980 and 1981, significant losses resulted despite use of captan and benomyl. In 1982 and 1984, favorable weather conditions resulted in less than average disease pressure. Only fields with an unusually bad history of Botrytis or other unusual disease-promoting conditions were treated. These fields responded very well to the treatment.

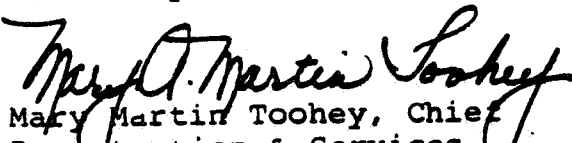
e. Estimations of disease control under field conditions with Ronilan generally run about 80%.

BASF has submitted a request for federal registration for this use in the last year. It is identified as petition #6F2934.

The knowledgeable expert to contact for further information is Dr. Pete Bristow, Western Washington Research & Extension Center, Puyallup, Washington. The phone number is 206/593-8519.

If you have any questions, please contact this office at 206/753-5064.

Sincerely,

  
Mary Martin Toohey, Chief  
Registration & Services  
Ag Chemical Branch

MMT/lm

cc: Pete Bristow  
Dick Maxwell  
Lyn Frandsen  
Craig McConnell  
Melinda Schluter  
Bob Mitchel  
Dave Kile